

Delem

0.500"

## Work Order ID 114413

March-04-14 3:05:03 PM

Item ID: D3395-1

Revision ID:

Item Name: Bushing

Start Date: 25/03/2014 Start Qty: 40.00 \*40\*

Required Date: 25/03/2014 Req'd Qty: 40.00 \*40\*

Reference:

Approvals: Process Plan: 1403-05 Date: 14-03-05  
QC: \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Accept

\*N900040100\*

Setup Start

\*NS1\*

Stop \*NS2\*

Cust Item ID:

Customer:

Run Start

\*NR1\*

Stop \*NR2\*

Draw Nbr

Revision Nbr

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

D3395

Rev A

100

\*100\*

Hardinge

Hardinge CNC Lathe Small

Hardinge CNC LATHE SMALL

Memo

Turn as per Folio FA513 and Dwg D3395 Deburr

0.00

0.00

0.00

0.00

0.00

0.00

110

\*110\*

QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

ET 14-03-13  
40 Ø DFC 2014-03-13

ET 14-03-13  
40 Ø

120

\*120\*

QC

Quality Control

QC8- Inspect parts - second check

Memo

DAS  
40  
9-89

40 Ø 14/03/13

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	DISPOSITION			AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

## FAULT CATEGORY

Landing Gear	General				
Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>	
Centre Not Concentric <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>	
Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>	
Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>	
Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>	
Crushing <input type="checkbox"/>	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>		
Heat Treat <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>		
Inspection Strip in Tube <input type="checkbox"/>	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>			
Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>			
Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>			
Wave/Twist in Tube <input type="checkbox"/>	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>			

Work Order ID 114413

March-04-14 3:05:03 PM

\*114413\*

Page 2

Item ID: D3395-1

Revision ID:

Item Name: Bushing

Start Date: 25/03/2014 Start Qty: 40.00 \*40\*

Required Date: 25/03/2014 Req'd Qty: 40.00 \*40\*

Reference:

Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_  
QC: \_\_\_\_\_ Date: \_\_\_\_\_

Accept

\*N900040100\*

Setup Start

\*NS1\*

Stop

\*NS2\*

Cust Item ID:

Customer:

Run Start

\*NR1\*

Stop

\*NR2\*

Sequence ID/  
Work Center ID

Operation  
Description

130

Identify as per dwg & Stock Location: STO4

\*130\*

Packaging

Packaging

Tooling: \_\_\_\_\_ Date: \_\_\_\_\_  
SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
0.00							
0.00							

40X DAS  
28 9-00 14-03-13

140

QC21- Final Inspection - Work Order Release

\*140\*

QC

Quality Control

Memo

Memo

0.00  
0.00

MLO 14-03-14

ME  
14-3-14

DQA:

Date:



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed:

Date:

### Work Order update only

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
Suspected Unapproved				Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Suspected Unapproved <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>			
Root Cause	Date	Step	Qty	Description of work order update or non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector	
Design											
Doc/Data											
Equip/Tooling											
Handling/Pre											
Material											
Operator											
Offset/Setup											
Process											
Supplier											
Training											
Transport											
Unapproved											
FAULT CATEGORY											
Landing Gear			General								
Bending Centre Not Concentric Cracks Crimp/Kink/Ripple/Wave Cuffs Crushing Heat Treat Inspection Strip in Tube Marks/Chatter Turning Sequence Wave/Twist in Tube			Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damage/Defect <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drawing <input type="checkbox"/> Drill Holes <input type="checkbox"/> Finish <input type="checkbox"/> Fit/Function <input type="checkbox"/> Folio/Program <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete/Unqualified <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Misaligned/off center <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Off-set <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Set-up <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other <input type="checkbox"/>								

**Picklist Print**

March-04-14 3:05:03 PM

Page 1

Work Order ID: 114413

**\*114413\***

Parent Item: D3395-1

**\*D3395-1\***

Parent Item Name: Bushing

Start Date: 25/03/2014

Required Date: 25/03/2014

Start Qty: 40.00

Required Qty: 40.00

Comments: IPP A05.02.23New issueKJ/JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
MDELRINR0.500		Purchased		No		100	f	110.4737	0.0625	2.63158			**

**\*MDFI RINR0 500\***

Delrin Round Bar .50"

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
MAT039	110.473684	
123698	3.473684	
m126369	107	

2.63158 JFC 2014-03-13

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	DISPOSITION				AGAINST DEPARTMENT/PROCESS				
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

FAULT CATEGORY									
Landing Gear		General							
		Bending <input type="checkbox"/>	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>			
		Centre Not Concentric <input type="checkbox"/>	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Set-up <input type="checkbox"/>			
		Cracks <input type="checkbox"/>	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>			
		Crimp/Kink/Ripple/Wave <input type="checkbox"/>	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Weld <input type="checkbox"/>			
		Cuffs <input type="checkbox"/>	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>			
		Crushing <input type="checkbox"/>	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>				
		Heat Treat <input type="checkbox"/>	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>				
		Inspection Strip in Tube <input type="checkbox"/>	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>		Other <input type="checkbox"/>			
		Marks/Chatter <input type="checkbox"/>	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>					
		Turning Sequence <input type="checkbox"/>	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>					
		Wave/Twist in Tube <input type="checkbox"/>	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>					

DART AEROSPACE LTD	Work Order:	1144113
Description: Bushing	Part Number:	D3395-1
Inspection Dwg: D3395	Rev: A	Page 1 of 1

# FIRST ARTICLE INSPECTION CHECKLIST

## X First Article      Prototype

Measured by:	BT	Audited by:	SA	Prototype Approval:	N/A
Date:	14-03-12	Date:	14-3-12	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	05.0714	New Issue	KJ/JLM <i>[Signature]</i>	<i>[Signature]</i>

DQA: \_\_\_\_\_ Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: \_\_\_\_\_ Date: \_\_\_\_\_

Work Order update only 

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS							
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>				
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>				
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>				
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>					

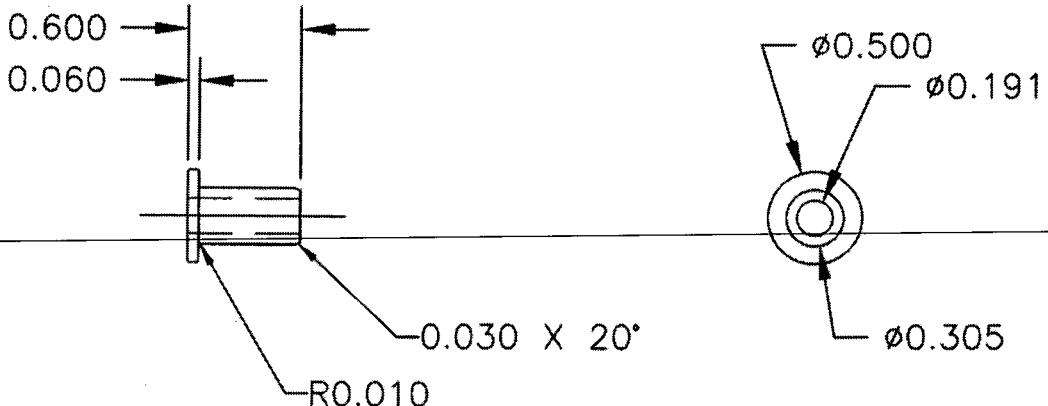
Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

Landing Gear	General			
<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Folio/Program	<input type="checkbox"/> Outside Dimensions	<input type="checkbox"/> Pressure/Forced
<input type="checkbox"/> Centre Not Concentric	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Grain	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Set-up
<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damage/Defect	<input type="checkbox"/> Hardware	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Temperature/Cure
<input type="checkbox"/> Crimp/Kink/Ripple/Wave	<input type="checkbox"/> Burrs	<input type="checkbox"/> Inspection Incomplete/Unqualified	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Weld
<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Wrong Stock Pulled
<input type="checkbox"/> Crushing	<input type="checkbox"/> Countersink	<input type="checkbox"/> Misaligned/off center	<input type="checkbox"/> Positioned Wrong	<input type="checkbox"/> Other
<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Power Loss/ Surge	
<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Drawing	<input type="checkbox"/> Misread		
<input type="checkbox"/> Marks/Chatter	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Off-set		
<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Calibration		
<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Fit/Function	<input type="checkbox"/> Out of Sequence		

**DART**

DESIGN CP	DRAWN BY CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>✓</i>	APPROVED <i>✓</i>	DRAWING NO. D3395	REV. A SHEET 1 OF 1
DATE 05.03.10		TITLE BUSHING	SCALE 1:1
	A	05.03.10	NEW ISSUE

**RELEASED**05.03.10 *✓*

SHOP COPY  
RETURN TO  
ENGINEERING  
UNCONTROLLED COPY  
SUBJECT TO AMENDMENT  
WITHOUT NOTICE  
WORK ORDER  
NO. 114413M  
14-03-05

**D3395-1 BUSHING**

- 1) MATERIAL: DELRIN (DART SPEC. M-DELRIN-R)
- 2) FINISH: NONE
- 3) BREAK ALL UNMARKED SHARP EDGES 0.005 TO 0.010
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Date: \_\_\_\_\_



## WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order update only 

Work Order: _____	DISPOSITION	AGAINST DEPARTMENT/PROCESS					
Part No. _____	Rework <input type="checkbox"/>	Skid-tube <input type="checkbox"/>	Crosstube <input type="checkbox"/>	Water Jet <input type="checkbox"/>	Engineering <input type="checkbox"/>		
NCR No. _____	Scrap <input type="checkbox"/>	Machining <input type="checkbox"/>	Small Fab <input type="checkbox"/>	Prod. Eng. Coor. <input type="checkbox"/>	Quality <input type="checkbox"/>		
	Use-as-is <input type="checkbox"/>	Thermoforming <input type="checkbox"/>	Finishing <input type="checkbox"/>	Rec/Store/Packaging <input type="checkbox"/>	Other <input type="checkbox"/>		
	Suspected Unapproved <input type="checkbox"/>	Large Fab <input type="checkbox"/>	Composite <input type="checkbox"/>	Supplier <input type="checkbox"/>			

Root Cause	Date	Step	Qty	Description of work order update or non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Design									
Doc/Data									
Equip/Tooling									
Handling/Pre									
Material									
Operator									
Offset/Setup									
Process									
Supplier									
Training									
Transport									
Unapproved									

### FAULT CATEGORY

Landing Gear	General	Fault Category	Action
Bending	Bend <input type="checkbox"/>	Folio/Program <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>
Centre Not Concentric	BOM/Route <input type="checkbox"/>	Grain <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>
Cracks	Broken/Damage/Defect <input type="checkbox"/>	Hardware <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>
Crimp/Kink/Ripple/Wave	Burrs <input type="checkbox"/>	Inspection Incomplete/Unqualified <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>
Cuffs	Contamination <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Moved <input type="checkbox"/>
Crushing	Countersink <input type="checkbox"/>	Misaligned/off center <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>
Heat Treat	Cut Too Short <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>
Inspection Strip in Tube	Drawing <input type="checkbox"/>	Misread <input type="checkbox"/>	Other <input type="checkbox"/>
Marks/Chatter	Drill Holes <input type="checkbox"/>	Off-set <input type="checkbox"/>	
Turning Sequence	Finish <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>	
Wave/Twist in Tube	Fit/Function <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>	